Sodium Intake

Introduction

There are many health related problems that are due to the diets of people today. Dietary problems are caused by the lack of education of consumers, the ignorance of consumers, and the prices on groceries. Some consumers attempt to make healthy decisions when going to the supermarket to buy their groceries. However, they can only attempt to make a decision because companies use their labels to deceive people. Also, the average person usually only knows what is healthy and what is not because of the media and what they air/publish. Many consumers, on the other hand, are ignorant. They choose not to care about whether they are healthy or not. These people do not even glance at labels and instead choose very unhealthy foods. Some people do know what is healthy for them to eat and look at all the labels, but cannot afford the foods that they want. All the unhealthy processed foods are at a much cheaper price than healthy food choices.

I, personally, did not choose this topic, but I am aware of the importance of it. A common health problem today is high blood pressure. Sure, high blood pressure can be caused by stress and other external factors, but a high daily sodium intake level is a common source. So, what I will choose to focus on, due to my topic, is the fact that a person risks increasing their blood pressure by having a high daily sodium intake level. Sodium, in small amounts, is essential for the body and its functions. However, too much sodium can, and will, cause increase blood pressure.

Section 1: Background and Problem Statement

- **Web site #1 Name: Healthy People 2010 "12-11" and Healthy People 2010 "19-10"**
- **Web address: http://www.healthypeople.gov/document/html/objectives/12-11.htm and http://www.healthypeople.gov/document/html/objectives/19-10.htm**
- **Background Information:**

One of Healthy People 2010's (HP2010) goals is to increase the proportion of adults with high blood pressure who are taking action (for example, reducing sodium intake) to help control their blood pressure ("12-11" par 1). Another one of HP2010's goals is to increase the proportion of persons aged 2 years and older who consume 2,400mg or less of sodium daily ("19-10" par 1). Data sources used to measure the progress being made for these problems are: the National Health and Nutrition Examination Survey, the CDC, the NCHS, and the National Health Interview Survey ("12-11" and "19-10" par 5). These two sites do not mention anything other than the percentage total of people taking action against the problem and the percentage of people who have consumed 24,000 mg or less of sodium daily.

- **Web site #2 Name: Sodium in the Diet**
- **Web address: http://www.ext.colostate.edu/pubs/foodnut/09354.html**
- **Background Information:**

Even though HP2010 does have sodium intake levels as a topic of interest, they only had past information sources, for example sources from 1990. Because of that I am using another source to describe my topic. Sodium is part of everyone's diet, but there is a limit as to how much is too much. The minimum amount of sodium intake that should be taken in, under ideal conditions, would be 1,500 mg, and the maximum amount would be 2,300-2,400 mg (Sodium par 2). Sodium intake is one of the factors involved in the development of high blood pressure, also known as hypertension (par 3). Reducing sodium intake, eating healthy, maintaining ideal body weight, physical exercise, stress management and the amount of mono-and polyunsaturated fatty acids in the diet are important considerations when fighting hypertension (par 4). Even though too much sodium is a bad thing, it has an important role in maintaining the water balance within cells and in the function of both nerve impulses and muscles (par 7). The kidneys excrete any extra sodium and consuming excess sodium may lead to water retention (par 7). Athletes and

heavy laborers are sometimes concerned about not getting enough sodium to replace what is lost through perspiration, but the losses are easily replenished at the next meal (par 8). Many people think of salt and sodium as the same thing, but table salt is 40 per cent sodium and 60 per cent chloride (par 9). It is the sodium portion of salt that is important to people concerned about high blood pressure (par 9). When looking at food labels for sodium content it is not only important to look at the sodium level, but also for the ingredients that contain some form of salt or sodium (par 13).

- **Web site #3 Name:** **NIH Update**
- **Web address:** **http://www.nhlbi.nih.gov/new/press/17-1998.htm**
- **Background Information:**

According to the National Institutes of Health, high blood pressure, or hypertension, affects about 50 million Americans, or one in four adults (NIH par 1). Hypertension is the leading cause of stroke and contributes to heart attack, heart failure, and kidney failure (par 1). Some Americans, such as older Americans and African Americans, are at a particularly high risk from high blood pressure (par 1). Sodium chloride, or table salt, increase average levels of blood pressure, but some individuals have greater blood pressure responses to salt than others (par4). This fact has caused controversy among scientists and media about the effect of sodium consumption on blood pressure. The recommended level of sodium consumption, according to the National High Blood Pressure Education Program and supported by the National Heart, Lung, and Blood Institute, is 2,400 mg, which is equal to six grams of salt, or sodium chloride (par 10). Other organizations that support this amount of sodium consumption for a healthy diet are: the U.S. Department of Agriculture, the U.S. Department of Health and Human Services and the American Heart Association (par 10).

Section 2: Research

- **Web site #1 Name: Effects on Blood Pressure of Reduced Dietary Sodium and the Dietary Approaches to Stop Hypertension (DASH) Diet**
- **Web address: http://www.ncbi.nlm.nih.gov/sites/entrez**
- **Summary of the research:**

I don't know how I was able to, but I found the pdf of this experiment. The effect of dietary composition on blood pressure is a subject of public health importance (Effects par 1). The researchers studied the effect of different levels of dietary sodium in conjunction with the Dietary Approaches to Stop Hypertension (DASH) diet, which is rich in vegetables, fruits, and low-fat dairy products, in persons without hypertension (par 1). Within this diet, participants ate foods with high, intermediate, and low levels of sodium for 30 consecutive days each, in random order (par 4). The findings were that the reduction of sodium intake to levels below the current recommendation of 100 mmol per day and the DASH diet both lower blood pressure substantially, with greater effects in combination than singly (par 4). Also, long-term health benefits were found to depend on the ability of people to make long lasting dietary changes and the increased availability of lower-sodium foods (par 4).

- **Web site #2 Name: Effects of Diet and Sodium Intake on Blood Pressure: Subgroup Analysis of the DASH-sodium Trial.**
- **Web address: http://www.ncbi.nlm.nih.gov/sites/entrez**
- **Summary of the research:**

Once again, I was somehow able to find the pdf for this experiment. The point of this experiment was to determine the effects on blood pressure of reduced sodium intake and the DASH diet in additional subgroups (Effects par 2). Initial findings from the Dietary Approaches to Stop Hypertension (DASH)-Sodium Trial demonstrated that reduction of sodium intake in two different diets decreased blood pressure in participants with and without hypertension (par 1). The DASH diet plus reduced sodium intake is recommended to control blood pressure in diverse subgroups (par 9).

- **Web site #3 Name: Dietary Sodium Intake and Subsequent Risk of Cardiovascular Disease in Overweight Adults**
- **Web address: http://jama.ama-assn.org/cgi/content/abstract/282/21/2027**
- **Summary of the research:**

Dietary sodium is positively associated with blood pressure, and ecological and animal studies both have suggested that high dietary sodium intake increases stroke morality (Dietary par 1). The objective of this study was to examine the risk of cardiovascular disease associated with dietary sodium intake in overweight persons (par 2). The analysis of the experimental results indicated that high sodium intake is strongly and independently associated with an increase risk of cardiovascular disease and all-cause mortality in overweight persons (par 7).

Section 3: Statistics

- **Web site #1 Name: Intake of Calories and Selected Nutrients for the United States Population, 1999-2000**
- **Web address: http://www.cdc.gov/nchs/data/nhanes/databriefs/calories.pdf**
- **Summary of the statistics:**

The importance of having estimates of dietary intakes is that it is part of monitoring the nutritional status of the U.S. population (Intake par 1). It allows for the assessment of dietary intake, allowing public health agencies and organizations to determine whether the population or subgroups within the population have inadequate intake of specific nutrients (par 1). Knowing this information may be helpful in addressing the obesity and overweight problems in the United States (par 1). According to this survey, the average daily intake of sodium in the United States is 3,375 mg, which is 975 mg more than the recommended daily sodium intake level (par 12). The survey was also able to show that sodium intake is higher for man than women, and is lower in young children than older age groups (par 12).

- **Web site #2 Name: One-Third of U.S. Adults Embraced Most Heart Healthy Behaviors in 1999-2002**
- **Web address: http://www.cdc.gov/nchs/data/databriefs/db17.pdf**
- **Summary of the statistics:**

Many of the U.S. Department of Health and Human Services Programs recommend behaviors to reduce risk of cardiovascular disease (CVD), including the National High Blood Pressure Education Program (NHBPEP) and the National Cholesterol Education Program (NCEP) (One-Third par 1). The objective of this report is to estimate the number of persons engaging in multiple behaviors recommended to reduce risk of CVD. One of the behaviors identified as a primary lifestyle modification to reduce CVD risk is screening for high blood pressure (par 1). According to this report, only 30.6% of adults limited sodium intake (par 4). The reports also found that 76.7% of adults claimed to not get regular screenings of blood pressure (par 9). Related to this, about 45.43% of adults were likely to follow the daily recommendations of sodium intake (par 10).

- **Web site #3:Morbity and Mortality Weekly Report**
- **Web address: http://www.cdc.gov/media/mmwrnews/2009/n090326.htm**
- **Summary of the statistics:**

Most Americans consume substantially more salt than is recommended or needed. Reducing high sodium consumption among Americans is a very complex national issue that will take efforts from various sectors, including public, private and the general public (Morbidity par 2). A new CDC study is the first to use national data to show that at least 69.2 percent of the adult population belong to a specific population group, including persons with high blood pressure, blacks, or middle-aged and older adults, that should aim to consume no more than 1,500 mg of sodium per day (par 2). Dietary sodium intake is important because higher consumption of sodium is strongly associated with increase in the risk of having higher blood pressure, a leading cause for heart disease and strokes, which is the first and third leading causes of death in the U.S. (par 2).

Section 4: Consumer Information

- **Web site #1 Name: Sodium: Are you Getting too Much?**

- **Web address:** **http://www.mayoclinic.com/health/sodium/NU00284**
- **Summary of the information:**

The main sources of sodium in the average U.S. diet are: 5% added while cooking, 6% added while eating, 12% from natural sources and 77% from processed and prepared foods (Sodium par 2). Even though too much sodium is a bad thing, sodium is essential in small amounts. Your body needs sodium in order to function properly. Some things that sodium does are: helps maintain the right balance of fluids in your body, helps transmit nerve impulses and influences the contraction and relaxation of muscles (par 4). If your kidneys cannot eliminate enough sodium, the sodium starts to accumulate in the blood, attracting and holding water (par 5). The added water to the blood increases its volume, causing the heart to work harder to move more blood (par 5).

- **Web site #2 Name:** **Sodium in the Diet**
- **Web address:** **http://www.ext.colostate.edu/pubs/foodnut/09354.html**
- **Summary of the information:**

According to this Web site, sodium is one factor in the development of high blood pressure (Sodium par 1). Sodium makes up 40% of table salt, which is therefore only 60% chloride (par 1). Most foods contain some sodium because it is naturally present (par 1). Several food industries are trying to find methods to decrease sodium in food while ensuring its safety (par 1). And, lastly, the maximum recommended level of sodium intake is 2,300 mg per day (par 1).

- **Web site #3 Name:** **Adverse Effects of High Sodium Intake**
- **Web address:** **http://www.ehow.com/about_5166896_adverse-effects-high-sodium-intake.html**
- **Summary of the information:**

Sodium, which is a component of salt, is important to our bodies. Sodium, in small quantities, is responsible for helping to keep the fluids balanced in our bodies, for helping to transmit nerve impulses to the brain, as well as contracting and relaxing our muscles (Adverse

par 2). Sodium is a fluid magnet—it collects and holds fluids—which means that too much salt means too much fluid (par 2). Depending on your health situation, the basic range of sodium that the body needs per day is between 1,500 mg to 2,400 mg (par 3). Too much sodium can cause swelling and bloating in the extremities (par 4). The kidneys are responsible for eliminating salt from the body, and if there is too much salt, the kidneys cannot eliminate it fast enough and fluid retention is the result (par 4). Fluid retention is also capable of building around the heart, which can cause high blood pressure, congestive heart failure, or even strokes and heart attacks (par 4).

Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name: Sodium: Are you Getting too Much?**
- **Web address: http://www.mayoclinic.com/health/sodium/NU00284/NSECTIONGROUP=2**
- **Summary of the information:**

This Web site is owned by Mayo Foundation for Medical Education and Research (Mission Statement). The mission is to empower people to manage health by providing useful and up-to-date information and tools that reflect the expertise and standard of excellence of Mayo Clinic (Mission Statement). According to this Web site, some things that a person can do in order to reduce the amount of sodium in their diet are: eat more fresh foods and fewer processed foods, opt for low-sodium products, remove salt from recipes whenever possible, limit your use of sodium-laden condiments, use herbs, spices and other flavorings to enhance foods, and use salt substitutes wisely (Sodium par 7). A person's taste for salt is acquired, so it's reversible (par 8). To unlearn this acquired taste, decrease your use of salt gradually and your taste buds will adjust (par 8).

- **Web site #2 Name: Sodium**
- **Web address: http://www.americanheart.org/presenter.jhtml?identifier=4708**
- **Summary of the information:**

The American Heart Association is a national voluntary health agency whose mission is: "Building healthier lives, free of cardiovascular diseases and stroke," (Mission). According to this Web site, a person can reduce the sodium in their diet by: choosing fresh, frozen or canned food items without added salts; selecting unsalted nuts or seeds, dried beans, peas and lentils; limiting the amount of salty snacks you eat, like chips and pretzels; avoiding adding salt and canned vegetables to homemade dishes; selecting fat-free or low-fat milk, low-sodium, low-fat cheeses, as well as low-fat yogurt; specifying what you want and how you want it prepared when dining out-asking for your dish to be prepared without salt; and using spices and herbs to enhance the taste of your food (Sodium par 6).

- **Web site #3 Name: Tips for Reducing Sodium in Your Diet**
- **Web address: http://www.nhlbi.nih.gov/hbp/prevent/sodium/tips.htm**
- **Summary of the information:**

"Your Guide to Lowering High Blood Pressure" is intended for people who are interested in learning more about preventing and controlling high blood pressure (About this Site). It is based on the National Heart, Lung, and Blood Institute clinical guidelines and research studies and provides up-to-date practical information on high blood pressure (About this Site). According to this Web site, you can reduce the amount of sodium in your diet by: buying fresh, plain frozen, or canned "with no salt added" vegetables; using fresh poultry, fish, and lean meat, rather than canned or processed types; using herbs, spices and salt-free seasoning blends in cooking and at the table; cooking rice, pasta, and hot cereals without salt-cutting back on instant or flavored rice, pasta and cereal mixes; choosing "convenience" store foods that are lower in sodium-cutting back on frozen dinners, pizza, packaged mixes, canned soups or broths, and salad dressings; rinsing canned foods, such as tuna, to remove some sodium; when available, buying low- or

reduced-sodium, or no-salt-added versions of foods; and choosing ready-to-eat breakfast cereals that are lower in sodium (Tips par 1).

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